

Lesson 3: The Carbon Cycle

LT(s): Learning Target(s)	DLT(s): Knowledge + (IRM)	DLT(s): Skill + (IRM)
STEM 8 : What is Climate	Compare Carbon and Carbon Dioxide	Diagram the Carbon Cycle
STEM 8 : Causes of Climate Change	Contrast Carbon sources and sinks	
	Describe Carbon Cycle (I)	
New Vocabulary: Element, Carbon, Molecule, Gas, Carbon Dioxide, Sources, Sinks, Carbon Cycle, Balance		
Resources: 1. Carbon Cycle Slides 2. The Elements 3. Lucid Chart		

Review

- What is the Greenhouse Effect? What is the Runaway Greenhouse Effect on Venus?

Carbon and the Carbon Cycle

Think/Pair/Share:

- What makes the "atmospheric greenhouse" thicker? **Carbon** is an element, but doesn't float in the air.
- Carbon dioxide** is a molecule, a gas at room temperature and DOES float.

What are Elements?

- Video: [The Elements](#) (They Might Be Giants)

Think/Pair/Share:

- Why doesn't the earth have a Runaway Greenhouse Effect? Because plants breathe Carbon Dioxide!

Presentation

- Plants are Carbon **sinks**
- Humans are Carbon **sources**
- There are **four greenhouse gasses**: CFCs, Methane, Nitrous Oxide, Carbon Dioxide

Think/Pair/Share & Graph Reading:

- Which gas blocks the most heat?
- Which gas does the most damage?
- Why are those answers different?

Diagrams and Graph

- Together:** Flow Diagram the Carbon Cycle with LucidChart <https://lucid.app>, 2WA UZG
- Detailed Carbon Cycle Graph:** Sources and Sinks must be in balance.

Think Pair Share

- What happens in the winter when plants lose their leaves? Why doesn't it get hotter in the winter?